EIC-2201 Serial

2U 19″ Standard Original Rack Mount Box PC

Version: A0

Announcement

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Safety Instructions

1. Please carefully read the users' manual before handling the product;
2. Before inserting, removing or re-configuring the boards, please firstly disconnect the AC power or unplug the AC power cable from the power source to prevent damage to the product and ensure your personal safety;
3. Before removing this product, please firstly unplug the AC cable from power source;
4. When inserting or removing boards, please firstly unplug the AC power cable from power sources;
5. Before connecting or disconnecting any signal cable, make sure all power cables are unplugged in advance;
6. To avoid unnecessary damage caused by turning on/off computer frequently, wait at least 30 seconds before re-turning on the computer.
7. All the operations such as upgrade, remove or installation shall be implemented on the ESD worktable, because some exactitude components are sensitive to electrostatic discharge (ESD).
8. If there's no ESD worktable, please take the following steps to prevent damage from electrostatic discharge (ESD):
    a) Wear a antistatic wrist strap and connect it with the metal part of the corresponding product;
    b) Always touch the metal chassis or frame before touching any components;
    c) Keep part of your body in contact with the metal chassis to discharge the static while handling components;
    d) Avoid all unnecessary movement;
    e) Hold the components (especially the boards) by the edges;
    f) Place the components on a grounded, static-free operating platform. Use a conductive foam pad if available (not the component wrapper).
    g) Do not let the components slide on the operating platform.
9. Use cross-head screwdriver to operate. A magnetic screwdriver is recommended (magnet helps to collect screws). Do not leave any tools or screws inside the chassis;
10. Assure abundant cooling and ventilation.

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Chapter 1 Product Introduction

Overview

EIC-2201 is a sort of 2U standard original rack-mount Box PC on industrial level. It supports Intel® LGA775 package, Core™ 2 Duo FSB 800/1066MHz CPU, the motherboard adopts a full-size card of EVOC, EPI-1812V2NAR; There is one 3.5″ hard disk, and it reserves space for one 3.5″ hard disk, support 3 PCI devices at the same time; the BIOS of motherboard supports one-key recovery function; users can order this function additionally according to requirements.

The front panel of Box PC adopts high-quality aluminum alloy, and the chassis body is molded with high-grade steel plate, so that this product is excellent in dust-proof, cooling, EMC and anti-vibration. The system power supports AC 220V redundancy function in order to provide a stable operating environment. So it can be widely used in automatic fields such as electric power, railway, intelligent traffic and building monitoring, etc.

Features and Specification

Microprocessor

Intel® Core™2 Duo, Pentium® D, Pentium® 4 FSB 533/800/1066MHz LGA775 CPU.

Chipset

Intel® Q965 + Intel® ICH8 (R)

System Memory

Provide 240pin DDR Ⅱ memory slot, the box pc is configured with 1G or 2G memory, up to 4GB.

Video Function

Q965 integrates GMA3000 graphic controller, supports VGA.

Network Function

Two on-board 10/100/1000Mbps Ethernet ports, they support Wake-On-LAN.

Expansion Bus

Support dual-channel DDRⅡ 533/667/800MHz memory, PCI Express, and it is compatible with ISA bus and PCI 2.3 bus.

Audio Function

On-board HDA ALC888 audio controller, support MIC-in/Line-in/Speaker-out.

Main Performances

Dimensions/Weight and Environment

- Dimensions: 470.00 mm (D) x 440.00 mm (W) x 88.60 mm (H)
- Weight: 11.25Kg (with common power) or 13.40Kg (with redundancy power)
- Operating Temperature: -10℃ ~ +55℃ (with redundancy power: 0℃ ~ +45℃)
- Operation Humidity: 5%~95%, 40℃ (non-condensing);
- Non-Operating Temperature: -40℃ ~ 60℃

EMC Compliance

- Limits of radio disturbance is compliant with GB9254-1998 class A
- Immunity to disturbance is compliant with the limits of GB/T 17618-1998

Power Features

- EIC-2201-01 ATX Power:
  Input voltage/Frequency: 100 ~ 240VAC 50Hz/60Hz
  General Power Consumption: 300W
  Output Voltage: +5V, +12V, +3.3V, +5VSB, -5V and -12V
- EIC-2201-02 ATX Redundancy Power:
  Input Voltage/Frequency: 100 ~ 240VAC 50Hz/60Hz
  General Power Consumption: 300W
  Output Voltage: +5V, +12V, +3.3V, +5VSB, -5V and -12V
- Electric parameter and safety protection features are compliant with power technique standard.
- Safety and EMC capability are compliant with 3C requirements.

Reliability

- MTBF≧50000h;
- MTTR≦0.5h;

Safety

- GB4943 Compliant

Mechanical and Environmental Adaptability

- Anti-vibration: amplitude 5-19Hz/1.0mm; peak-to-peak acceleration 19-200Hz/1.0g;
- Anti-shock: peak-to-peak acceleration 10g, duration 11ms.

Requirements of Transportation and Storage

- **Transportation:**

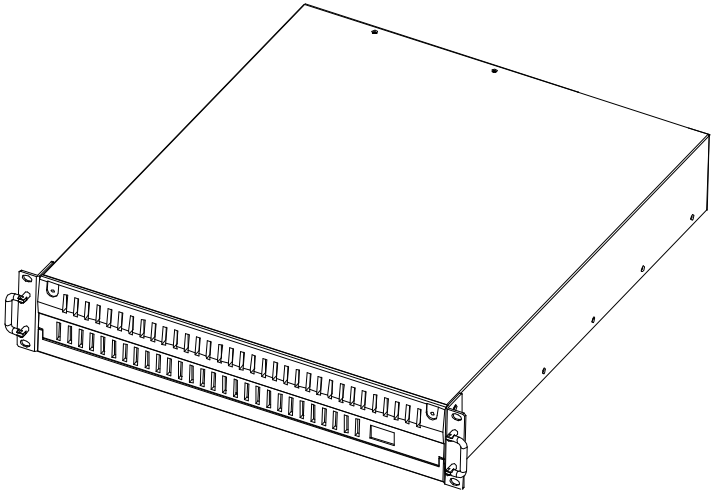
Well-packaged products suit for transportation by truck, ship, and plane. During transportation, products should not be put in open cabin or carriage. When transshipping in route, products should not be stored in the open without protection from the atmospheric conditions. Products should not be transported together with inflammable, explosive and corrosive substances and are not allowed to be exposed to rain, snow and liquid substances and mechanical force.

- **Storage:**

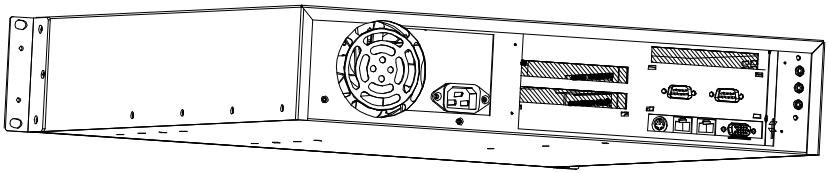
Products should be stored in package box when it is not used. And the warehouse temperature should be 0°C~40°C, and relative humidity is 35%~85%. In the warehouse, there shall not be harmful gas, inflammable, explosive products, and corrosive chemical products, and strong mechanical vibration, shock and strong magnetic field affection. The package box should be over ground at least 10cm height, and 50cm away from wall, thermal source, and vent.

Chapter 2 Installation

Product Outline

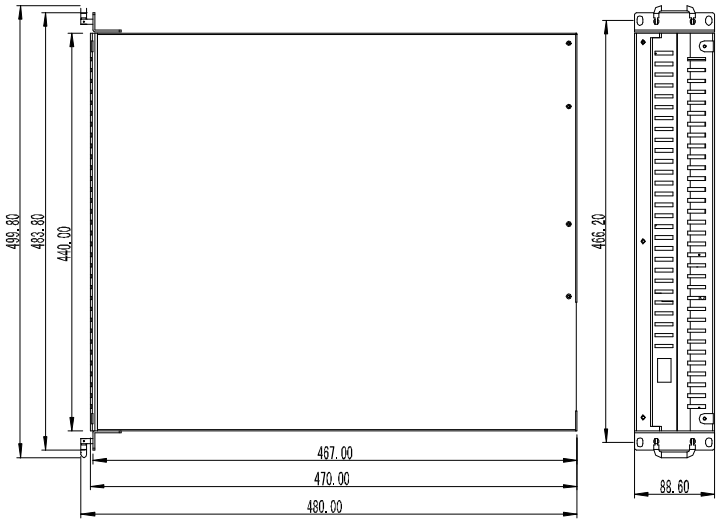


Front View



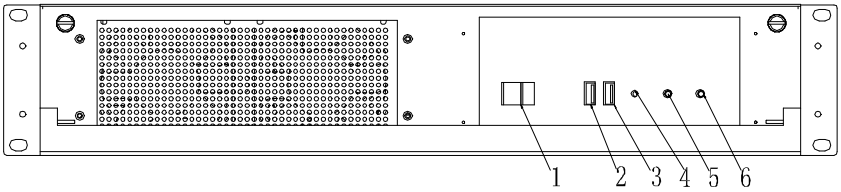
Rear View

Product Dimension Drawing



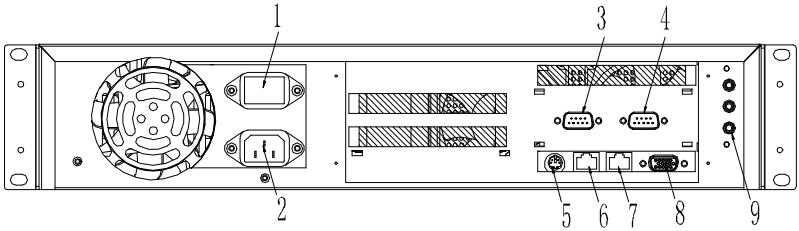
Unit: mm

Functions Sketch Map



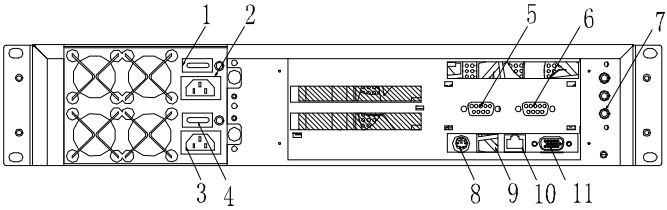
Functions on Front Panel

1. Switch	2. USB	3. USB
4. Reset	5. Hard Disk Indicator	6. Power Indicator



Functions on Rear Panel of Common Power

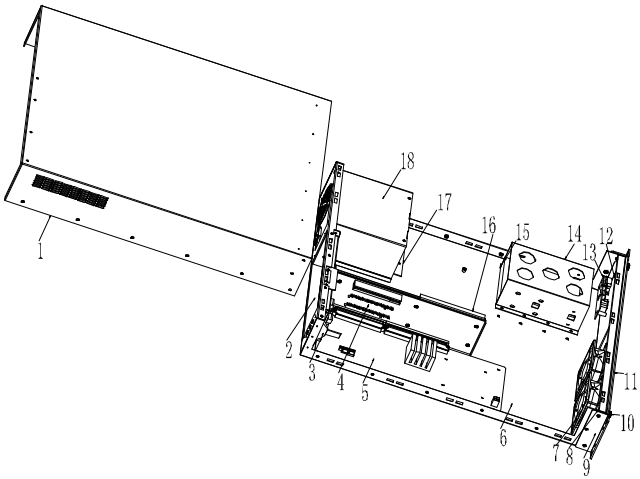
1. Power Switch	2. Power Socket	3. Serial Port
4. Serial Port	5. PS/2 Keyboard and Mouse Interface	6. Ethernet Port
7. Ethernet Port	8. VGA Interface	9. Audio Interface



Functions on Rear Panel of Redundancy Power

1. Power Switch	2. Power Socket	3. Power Socket
4. Power Switch	5. Serial Port	6. Serial Port
7. Audio Interface	8. PS/2 Keyboard and Mouse Interface	9. Ethernet Port
10. Ethernet Port	11. VGA Interface	

Assembly Explanation



1. Chassis Cover	2. I/O Bracket	3. Audio
4. Baseboard	5. Motherboard	6. Chassis Body
7. Fan	8. Fan Bracket	9. Hanger
10. Captive Screw	11. Front Panel	12. LED Board Bracket
13. LED Board	14. Hard Disk Bracket	15. Hard Disk
16. Baseboard Bracket	17. Power Bracket	18. ATX Power

1. Install the Hard Disk

Fix the rubber mad to the hard disk bracket; install the hard disk with its bracket; fix the hard disk component via screws in the pre-reserved place in the chassis. Pay attention to the direction of hard disk interface during the installation.

2. Uninstall/Install the baseboard and motherboard

Uninstall the baseboard and motherboard at the same time, and assemble the new ones; then put them in the chassis and fix the corresponding screws.

3. Install the Expansion Card

Remove the batten firstly if an expansion card is needed; insert the expansion card into the slot on baseboard; fix the expansion card with the batten removed just now.

Chapter 3 Installation of Drivers

Regarding the installation of the driver program of the product, please refer to the CD of associated PC.

Please visit: http://www.evoc.com for more information.

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安全使用小常识

1. 产品使用前，务必仔细阅读产品说明书；
2. 为避免人体被电击或产品被损坏，在每次对板卡进行拔插、重新装配或配置前，须先关闭交流电源或将交流电源线从电源插座中拔掉；
3. 在需对产品进行搬动时，务必先将交流电源线从电源插座中拔掉；
4. 当产品需增加 / 减少板卡时，务必先拔掉交流电源；
5. 当需连接或拔除任何信号线前，须确定所有的电源线事先已被拔掉；
6. 为避免频繁开关机对产品造成不必要的损伤，关机后，应至少等待 30 秒后再开机；
7. 如果要进行升级或拆装等动作，须在静电放电工作台上完成所有操作，因为有些精密器件对静电放电（ESD）很敏感；
8. 如果没有静电放电工作台，可通过以下方法降低 ESD 可能造成的危害：
   a) 戴上一条防静电腕带并与相应产品的金属部分相连；
   b) 在触摸产品部件前，先触摸相应产品机箱上的金属壳；
   c) 当插拔部件时，身体最好与产品的金属机箱保持接触，以释放静电；
   d) 避免不必要的走动；
   e) 拿产品部件（尤其是板卡）时仅拿住边缘；
   f) 将产品部件置于一个接地的无静电的操作平台上。如果可能的话，使用一块导电泡沫垫（非部件的包装材料）；
   g) 不要让部件在操作平台上滑动。
9. 用十字螺丝刀进行操作，最好是强力螺丝刀（带磁性，避免螺丝遗留在机箱内）。要注意的是，一定不要将工具或零件遗漏在机箱内；
10. 保证系统良好的散热与通风。

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第一章　产品介绍

简介

EIC-2201是一款工业级2U标准上架型原装整机，支持Intel® LGA775封装Core™ 2 Duo FSB 800/1066MHz CPU，主板采用我司全长卡EPI-1812V2NAR；整机内部安装1个3.5寸硬盘，预留一个3.5寸硬盘位，同时支持3个PCI设备；整机主板BIOS支持一键恢复功能，用户可根据需求另外定制。

整机前面板采用优质铝合金造型，箱体为优质金属钢板成型，具有良好防尘、散热、EMC和抗振性能。整机系统电源支持交流220V冗余功能，从而使整个系统运行环境更稳定可靠。可广泛应用在电力，铁道，智能交通，楼宇监控等工业自动现场领域。

主要功能指标

微处理器

支持 Intel® Core™2 Duo，Pentium® D，Pentium® 4 FSB 533/800/1066MHz LGA775 CPU。

芯片组

Intel® Q965 + Intel® ICH8（R）

系统存储器

提供两条 240pin DDRⅡ内存插槽，整机配置 1G 或 2G 内存，可支持最大内存容量 4GB。

显示功能

Q965 集成 GMA3000 图形控制器，支持 VGA 显示。

网络功能

板载两个 10/100/1000Mbps 以太网网口，支持网络唤醒功能。

扩展总线

支持双通道 DDRⅡ 533/667/800MHz 内存，支持 PCI Express，兼容 ISA 总线、PCI 2.3 总线。

音频功能

板载 HDA ALC888 音频控制器，支持 MIC-in/Line-in/Speaker-out。

主要性能指标

机械尺寸、重量与环境

- 外形尺寸：470.00mm（深）×440.00mm（宽）×88.60mm（高）
- 重量：11.25Kg（带普通电源）或 13.40Kg（带冗余电源）
- 工作温度：-10℃～＋55℃（冗余电源配置：0℃～+45℃）
- 相对湿度：5%～95%，40℃（无结露）
- 储存温度：-40℃～60℃

电磁兼容性

- 符合无线电骚扰限值 GB9254-1998 标准 A 级；
- 抗扰度符合 GB/T17618 标准的限值。

电源特性

- EIC-2201-01 ATX 电源：

  输入电压/频率：100～240VAC 50Hz/60Hz

总功率：300W

输出电压：+5V、+12V、+3.3V、+5VSB、-5V、-12V

- EIC-2201-02 ATX 冗余电源：

  输入电压/频率：100～240VAC 50Hz/60Hz

  总功率：300W

  输出电压：+5V、+12V、+3.3V、+5VSB、-5V、-12V

- 电参数与安全保护特性符合电源技术标准
- 安规和 EMC 性能符合 3C 要求

可靠性

- 平均无故障工作时间：MTBF≥50000h；
- 平均维修时间：MTTR≤0.5h。

安全性

- 满足 GB4943 的基本要求。

机械环境适应性

- 抗振动：5-19Hz/1.0mm 振幅；19-200Hz/1.0g 峰-峰加速度；
- 抗冲击：10g 峰-峰加速度，11ms 周期。

运输与贮存要求

- **运输：**

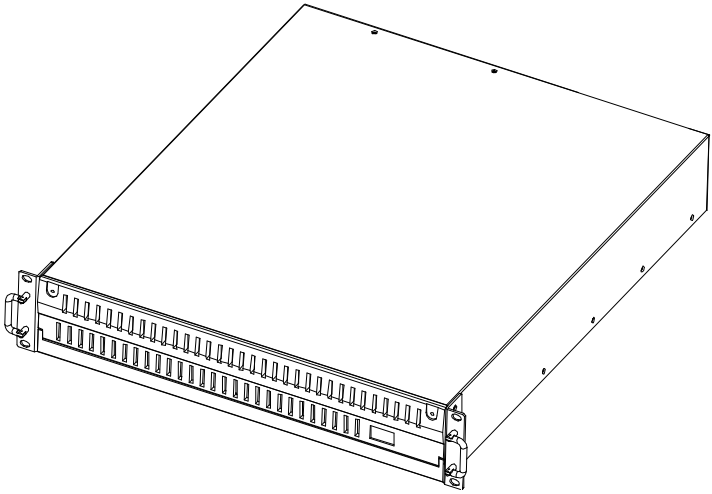
  包装好的产品能以任何交通工具，运往任何地点，在长途运输时不得装在敞开的船舱和车厢中，中途转运时不得存放在露天仓库中，在运输过程中不允许和易燃、易爆、易腐蚀的物品同车（或其他运输工具）装运，并且产品不允许经受雨、雪或液体物质的淋袭与机械损坏。

- **贮存：**

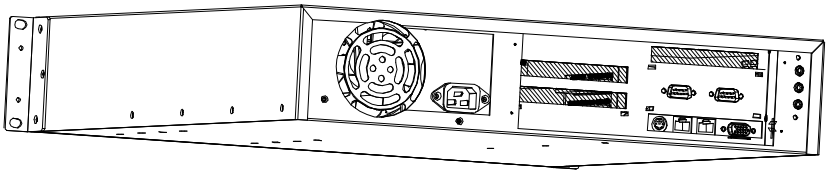
产品贮存时应存放在原包装箱内，存放产品的仓库环境温度为 0～+40℃，相对湿度为 35%～85%。仓库内不允许有各种有害气体、易燃、易爆炸的产品及有腐蚀性的化学物品，并且无强烈的机械振动、冲击和强磁场作用。包装箱应垫离地面至少 10cm，距离墙壁、热源、冷源、窗口或空气入口至少 50cm。

第二章　安装说明

产品外观图

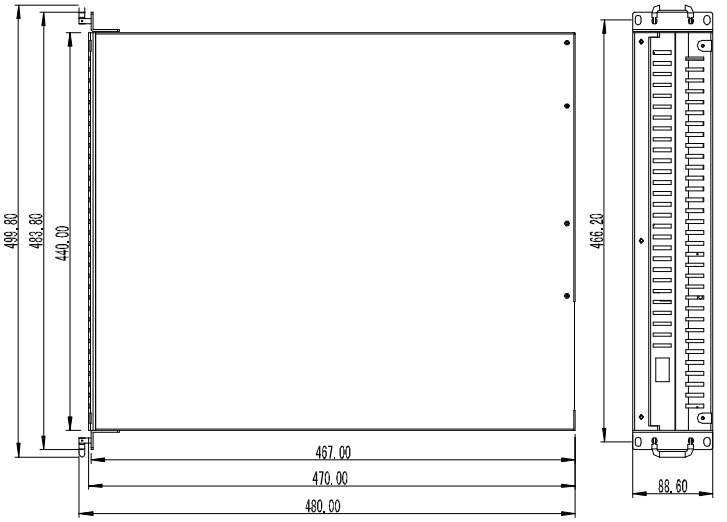


正面图



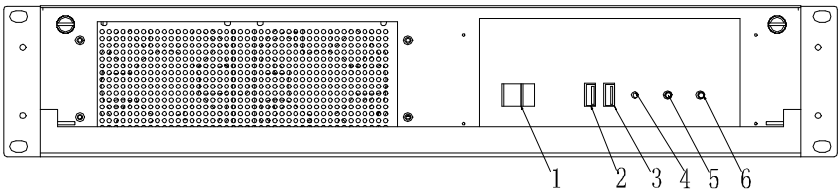
背面图

产品外形安装尺寸图



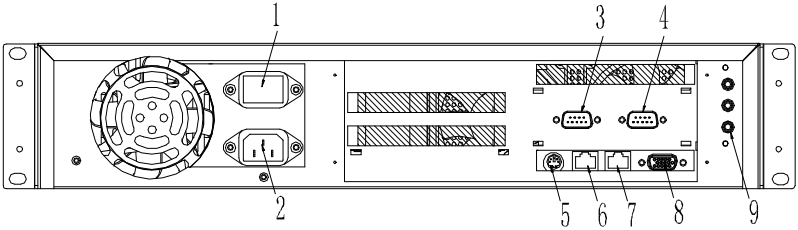
单位：mm

功能示意图



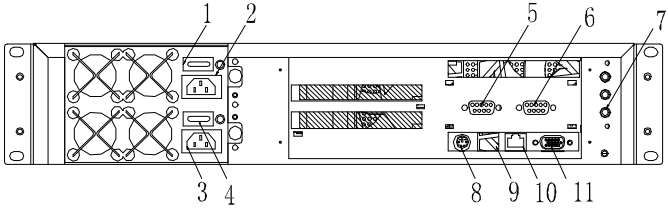
前面板功能示意图

1、开关	2、USB	3、USB
4、复位	5、硬盘指示灯	6、电源指示灯



普通电源后面板功能示意图

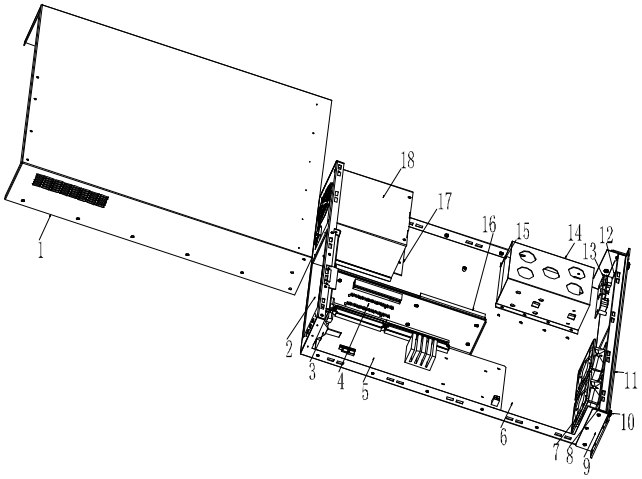
1、电源开关	2、电源插座	3、串口
4、串口	5、PS/2 键盘鼠标接口	6、网络接口
7、网络接口	8、VGA 接口	9、音频接口



冗余电源后面板功能示意图

1、电源开关	2、电源插座	3、电源插座
4、电源开关	5、串口	6、串口
7、音频接口	8、PS/2 键盘鼠标接口	9、网络接口
10、网络接口	11、VGA 接口	

装配说明



1、箱盖	2、I/O 支架	3、音频
4、底板	5、主板	6、箱体
7、风扇	8、风扇支架	9、挂耳
10、松不脱螺钉	11、前面板	12、灯板支架
13、灯板	14、硬盘支架	15、硬盘
16、底板支架	17、电源支架	18、ATX 电源

1. 硬盘装配

先将橡胶垫固定于硬盘支架上，同时将硬盘与硬盘支架装配好，然后将硬盘组件用螺钉固定于机箱预留位置即可。安装过程中注意硬盘接口的方向。

2.底板与主板拆装

需将主板和底板同时拆下，再将需更换的主板与底板组装好，然后装入机箱，固定好主板和底板螺钉即可。

3.扩展卡装配

如需要使用扩展卡请先将压条拆下，再将扩展卡装入底板卡槽中，然后用拆下的压条固定扩展卡。

第三章　驱动程序安装说明

本产品的驱动程序可依据整机配套光盘内容安装，在此不做介绍。

若想获得更详细的资料可至我公司网站http://www.evoc.com查询。